

Panel 4: Validation of Models

- Questioning whether the models, in relation to smaller companies, perform well. Stating that there are concerns raised about the relationship to the embedded costs.
- Questioning what occurs after the transition period when it appears that the models may not be working as they have in the previous three years for the larger companies.
- Responding to above question, stating that the deficiencies in the models, particularly in both the BCM II and its successor, as well as Hatfield and its successor, are so extreme that they are not only misallocating dollars between little companies, but they are misallocating debt dollars between pier one companies.
- Stating that an inherent defect of those models is creating such substantial errors that for big companies, they may be able to live with it. Stating that, conversely, little companies are going to die. You have to correct the fundamental modeling errors, which are the distributional customers, as well as the CBG problem.
- Elaborating that the assumptions in some of the models were wrong and that if you use incorrect assumptions and try and model the distribution of dollars based on those assumptions, little companies are going to die.

Implementation of the Local Competition Provisions in the Telecommunications Act of 1996: Interconnection between Local Exchange Carriers and Commercial Mobile Radio Service Provider

(Released August 8, 1996)

<i>Para. No.</i>	<i>Statements Of the FCC On Matters Relating to Rural Issues</i>
11	<ul style="list-style-type: none">• Determining that Congress recognized that the transition to competition presents special considerations in markets served by smaller telephone companies, especially in rural areas.• Stating that the FCC knows of these considerations and knows that they will be taken into account by state commissions.
38	<ul style="list-style-type: none">• Finding that LECs bear the burden of proving to a state commission that a suspension or modification of the requirements of Section 251(b) or (c) is justified.• Determining that rural LECs bear the burden of proving that continued exemption of the requirements of Section 251(c) is justified, once a bona fide request has been made by a carrier under Section 251.
61	<ul style="list-style-type: none">• Rejecting the position advocated by some parties that the FCC should not adopt national rules because such rules will be particularly burdensome for small or rural incumbent LECs.• Noting, however, that Section 251(f) provides relief for some of the FCC's rules. Also stating that national rules will assist smaller carriers that seek to provide competitive local service.• Noting that national rules will greatly reduce the need for small carriers to expend their limited resources securing their right to interconnection, services and network elements to which they are entitled under the 1996 Act. Noting that this is particularly true with respect to discrete geographic markets that include areas in more than one state.• Recognizing that even a small provider may wish to enter more than one market, and national rules will create economies of scale for entry into multiple markets.
114	<ul style="list-style-type: none">• Finding that national rules should reduce the uncertainty about the outcome that may be reached by different states in their respective regulatory proceedings, which will reduce regulatory burdens for

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<i>Para. No.</i>	<i>Statements Of the FCC On Matters Relating to Rural Issues</i>
120	<ul style="list-style-type: none"> • Stating that the Commission is addressing the impact of its rules on small incumbent LECs. • Determining, in response to an argument by the Rural Telephone Coalition ("RTC") that rules based on large urban properties cannot be blindly applied to small and rural LECs, that states will retain sufficient flexibility under the FCC's rules to consider local technological, environmental, regulatory and economic conditions. • Noting that Section 251(f) also may provide relief to certain small carriers.
154	<ul style="list-style-type: none"> • Agreeing with Small Cable Business Association that small entities seeking to enter the market may be particularly disadvantaged by delay. • Finding that designating a representative authorized to make binding representations on behalf of a party will assist small entities and small incumbent LECs by centralizing communications and thereby facilitating the negotiation process.
179	<ul style="list-style-type: none"> • Finding that uniform rules will permit all carriers, including small incumbent LECs, to plan regional or national networks using the same interconnection points and similar networks nationwide.
247	<ul style="list-style-type: none"> • Finding that National requirements for unbundled network elements are workable because the differences between incumbent LEC networks in different states are not great enough to overcome the pro-competitive benefits of a minimum list, applied to a broad range of networks across geographic regions, of required unbundled network elements. • Finding that unbundling requirements should not differ for small incumbent LECs because: (1) some small incumbent LECs may not experience any problems complying with the FCC's unbundling rules and (2) Section 251(f) provides relief to certain small LECs from FCC regulations implementing Section 251.

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Para. No.	Statements Of the FCC On Matters Relating to Rural Issues
365	<ul style="list-style-type: none"> • Rejecting the RTC's argument that rural ratepayers could be subject to higher local service rates if interexchange carriers are allowed to bypass access charges through the purchase of unbundled elements before proceedings regarding access reform and universal service are completed. • Rejecting the RTC's argument because FCC rules provide for a limited transitional plan to address public policy concerns raised by the bypass of access charges through unbundled network elements.
451	<ul style="list-style-type: none"> • Limiting the provision of unbundled interoffice facilities to existing incumbent LEC facilities, after considering the impact on small incumbent LECs and the RTC's argument that incumbent LECs should not be required to construct new facilities to accommodate new entrants. • Also noting that § 251(f) provides relief for certain small LECs from FCC regulations under § 251.
526	<ul style="list-style-type: none"> • After considering the impact on small incument LEC's, recognizing that the FCC's requirement of nondiscriminatory access to operations support systems recognizes that different incumbent LECs possess different existing systems. • Noting that § 251(f) of the Act provides relief for certain small LECs from FCC regulations implementing § 251.
575	<ul style="list-style-type: none"> • Addressing the economic impact on small incumbent LECs of its proposed rules on the meaning of the term "premises," the FCC states that it does not adopt rigid requirements for locations where co-location must be provided. • Stating that incumbent LECs are not required to physically co-locate equipment in locations where not practical for technical reasons or because of space limitations, and virtual co-location is required only where technically feasible. • Noting that § 251(f) of the Act provides relief to certain small LECs from FCC regulations implementing § 251.

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<i>Para. No.</i>	<i>Statements Of the FCC On Matters Relating to Rural Issues</i>
587	<ul style="list-style-type: none"> • Addressing the impact of its rules on the allocation of space for physical co-location on small incumbent LECs, the FCC states that it shall not require physical co-location at any point where there is insufficient space available. • Declining, however, to adopt rules regarding space availability that apply differently to small rural carriers because it believes the rules it is adopting are sufficiently flexible. • Also noting that § 251(f) provides relief to certain small LECs from FCC regulations implementing § 251.
629	<ul style="list-style-type: none"> • Noting that the FCC's adoption of a single set of pricing rules should minimize regulatory burdens, conflicts, and uncertainties associated with multiple, and possible inconsistent, rules, thus facilitating competition on a reasonable and efficient basis and minimizing the economic impact of FCC rules for small incumbent LECs.
679	<ul style="list-style-type: none"> • Finding that the adoption of a forward-looking cost-based pricing methodology should facilitate competition on a reasonable and efficient basis by all firms in the industry by establishing prices for interconnection and unbundled elements based on costs similar to those incurred by the incumbents, which may be expected to reduce the regulatory burdens and economic impact of FCC decisions for small incumbent LECs.
697	<ul style="list-style-type: none"> • After considering the impact of the rules regarding forward-looking common costs on small incumbent LECs, the FCC adopts an approach that calls for the following: the recovery of joint and common costs in the event the Commission adopts a forward-looking cost methodology. • In addition, the cost-based pricing methodology that the FCC is adopting is designed to permit incumbent LECs to recover their economic costs of providing interconnection and unbundled elements, which may minimize the economic impact of these decisions on small incumbent LECs. • Also noting that certain small incumbent LECs are either not subject to or can seek relief from FCC rules under § 251(f).

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Para. No.	Statements Of the FCC On Matters Relating to Rural Issues
706	<ul style="list-style-type: none"> • After considering the economic impact of precluding recovery of small incumbent LECs' embedded costs, the FCC determines that basing the prices of interconnection and unbundled elements on an incumbent LEC's unbundled cost would not advance the pro-competitive goals of the statute. • Noting that certain small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f).
722	<ul style="list-style-type: none"> • Recognizing that a mechanism that ensures incentives created by non-cost-based elements of access charges prior to completion of access reform and universal service proceedings should serve to minimize the potentially disruptive effects of FCC decisions on small incumbent LECs.
743	<ul style="list-style-type: none"> • Noting that there are regulatory burdens and economic impacts of FCC decisions on small incumbent LECs, the FCC concludes that, as a general rule, incumbent LECs' rates for interconnection and unbundled elements must recover costs in a manner that reflects the way they are incurred.
766	<ul style="list-style-type: none"> • Noting that decisions concerning averaging may be expected to lead to increased competition and more efficient allocation of resources, which should benefit small incumbent LECs.
783	<ul style="list-style-type: none"> • After considering the economic impact of the adoption of default proxy ceilings and ranges on small incumbent LECs, the FCC determines that the adoption of proxies for interim arbitrated rates should minimize regulatory burdens on the parties to arbitration, including small incumbent LECs, by permitting states to implement the 1996 Act more quickly and facilitating competition on a reasonable and efficient basis by all firms in the industry. • Also noting that small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f)(1).
907	<ul style="list-style-type: none"> • Noting that clear resale rules should minimize regulatory burdens and uncertainty for small incumbent LECs.

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Para. No.	Statements Of the FCC On Matters Relating to Rural Issues
934	<ul style="list-style-type: none"> • Stating that the presumptions established in conducting avoided cost studies regarding the avoidability of certain expenses may be rebutted by evidence that certain costs are not avoided, which should minimize any economic impact of the FCC's rule on this subject on small incumbent LECs. • Noting that certain small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f).
957	<ul style="list-style-type: none"> • After considering the proposal that services incumbent LECs offer at below-cost rates should not be subject to resale under § 251(c)(4), the FCC rejects the proposal, concluding that the 1996 Act provides that below-cost services are subject to the § 251(c)(4) resale obligation and that differences in incumbent LEC revenue resulting from the resale of below-cost services should be accommodated by decreased expenditures that are avoided because the service is being offered at wholesale. As such, resale of below-cost services at wholesale rates should not adversely impact small incumbent LECs. • Noting that certain small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f).
1059	<ul style="list-style-type: none"> • After considering the impact of rules regarding recovering lost contributions and common costs through termination charges on small incumbent LECs, the FCC concludes that termination rates for all LECs should include an allocation of forward-looking common costs, finding that the inclusion of an element for the recovery of lost contribution may lead to significant distortions in local exchange markets. • Noting that certain small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f).
1068	<ul style="list-style-type: none"> • Recognizing that there needs to be an adoption of interim rates, subject to a "true-up", which advances the pro-competitive goals of the statute, and also takes into consideration the economic impact of these rules on small incumbent LECs. • Noting that certain small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f).

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<i>Para. No.</i>	<i>Statements Of the FCC On Matters Relating to Rural Issues</i>
1088	<ul style="list-style-type: none"> • Rejecting the RTC's argument that symmetrical rates do not consider the cost involved and the use of another carrier's network. • Finding that, including small incumbent LECs' costs, serve as reasonable proxies for other carriers' costs of transport and termination for the purpose of reciprocal compensation. • Also finding that symmetry will avoid the need for small businesses to conduct forward-looking economic cost studies, in order for the states to arbitrate reciprocal compensation duties. • Noting that certain small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f).
1115	<ul style="list-style-type: none"> • Rejecting the RTC's argument that bill and keep arrangements fail to adequately deal with each carrier's costs. Finding that in addition to basing reciprocal compensation on the incumbent LEC's cost, allowing carriers to rebut a presumption of balance traffic volumes, the concern that bill and keep arrangements fail to adequately deal with each carrier's costs are addressed. • Noting that certain small incumbent LECs are either not subject to or can seek relief from the FCC's rules under § 251(f).
1144	<ul style="list-style-type: none"> • Adopting a flexible regulatory approach to pole attachment disputes that ensures consideration of local conditions and circumstances. This is the FCC's attempt to address the impact on small incumbent LECs.
1222	<ul style="list-style-type: none"> • Finding that utilities have the ultimate burden of proof in denial of access cases. Determining that this will minimize uncertainty and reduce litigation and transaction costs, because new entrants and small entities in particular are unlikely to have access to the relevant information without cooperation from the utilities.
1224	<ul style="list-style-type: none"> • Recognizing that written requirements regarding access and utilities involve some record-keeping obligations that could impose a burden on small incumbent LECs, but these burdens are outweighed by the benefit of certainty and expedient resolution of disputes.

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<i>Para. No.</i>	<i>Statements Of the FCC On Matters Relating to Rural Issues</i>
1253	<ul style="list-style-type: none"> • Agreeing with small incumbent LECs that the determination of whether a telephone company is entitled to exemption, suspension or modification of the § 251 requirements, generally should be left to the state commissions.
1262	<ul style="list-style-type: none"> • Finding that Congress did not intend to insulate smaller or rural LECs from competition and thereby prevent subscribers in those communities from obtaining the benefits of competitive local exchange service. As such, finding that in order to justify continued exemption once a bona fide request has been made, a LEC must offer evidence that application of those requirements would be likely to cause undue economic burdens beyond the economic burdens typically associated with efficient competitive entry.
1263	<ul style="list-style-type: none"> • Finding that rural LECs must prove to the state commission that they should continue to be exempt once a bona fide request has been made. • Finding that smaller companies must prove to state commissions that suspensions or modifications should be granted. • Finding that the party seeking exemption, suspension or modification is in control of the relevant information necessary for the state to make a determination regarding the request. • Finding that a rural company within § 251(f) only is required to make a showing when it receives a bona fide request for interconnection, services or network elements. • Declining to establish guidelines or rules on what constitutes a bona fide request or the universal service duties of requesting carriers that seek to compete with rural LECs.
1265	<ul style="list-style-type: none"> • Finding that there is no basis in the record for adopting other special rules or limiting the application of FCC rules to smaller or rural LECs.

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<i>Para. No.</i>	<i>Statements Of the FCC On Matters Relating to Rural Issues</i>
1283	<ul style="list-style-type: none">• Finding that states, in establishing procedures for arbitration, may develop specific measures that address concerns of small incumbent LECs.
1323	<ul style="list-style-type: none">• Rejecting the RTC's argument that making agreements between adjacent non-competing LECs available under § 252 will have a detrimental effect on small rural carriers.

Access Charge Reform Notice Of Proposed Rulemaking

(Released December 24, 1996)

Para. No.	Comments Requested Pertaining to Rural Issues
53	<ul style="list-style-type: none">• Seeking comment on the effect on small incumbent LECs of proposals to apply to incumbent LECs rules on allocation of universal service support interstate revenue requirements and to reform the transport rate structure.• Also seeking comment on the effect on small incumbent LECs of the tentative conclusion that changes adopted to TIC should apply to ROR incumbent LECs.
61	<ul style="list-style-type: none">• Seeking comment on how extending changes to recovery of certain NTS costs to ROR LECs would affect small incumbent LECs.
62	<ul style="list-style-type: none">• Seeking comment on the extent to which any proposed alternative recovery mechanism for recovering common line costs will affect small incumbent price cap LECs.
65	<ul style="list-style-type: none">• Seeking comment on how the extension of changes to the cap on SLCs to ROR LECs would affect small incumbent LECs.
119	<ul style="list-style-type: none">• Seeking comment on how possible revisions to the TIC would affect small incumbent LECs.
167	<ul style="list-style-type: none">• Seeking comment on the proposition that the removal of regulatory constraints only affects small incumbent LECs in the sense that regulatory constraints are not being removed for them as are some of the constraints for price cap incumbent LECs.• Also seeking comment on the proposition that small incumbent LECs will not be otherwise affected by the FCC's proposals regarding deregulation.• Also seeking comment on the proposition that while these proposals may indirectly affect small entities, especially competitive LECs and access customers, they will not have an impact on small entity reporting, recordkeeping or other compliance requirements.
215	<ul style="list-style-type: none">• Seeking comment on whether it is a violation of § 254(g) to allow LECs to collect charges from end users for originating access, terminate access or both and whether allowing such charges to be

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(Released December 24, 1996)

Para. No.	Comments Requested Pertaining to Rural Issues
	imposed on the party placing a call or the party receiving the call.
246	<ul style="list-style-type: none">• Seeking comment on how the FCC's proposed interstate ratemaking treatment of the new universal service support mechanism affects small incumbent LECs.
248	<ul style="list-style-type: none">• Seeking comment on the impact of proposals relating to forward-looking mechanisms on small incumbent LECs.
259	<ul style="list-style-type: none">• Seeking comment on how a decision to permit incumbent LECs to recover some or all of the difference between embedded and forward-looking costs would affect small incumbent LECs.
260	<ul style="list-style-type: none">• Seeking comment on the impact of any particular recovery mechanism, i.e. market-based recovery or regulated recovery, on small incumbent LECs.
280	<ul style="list-style-type: none">• Seeking comment on how small incumbent LECs will be affected by the tentative conclusions that non-dominant carriers have market power with regard to terminating access charges or that market value would preclude the marketplace from ensuring that terminated access rates are just and reasonable.• Also seeking comment on the effect of proposals to regulate terminating access on small incumbent LECs.
296	<ul style="list-style-type: none">• Seeking comment on how the proposal to delete Section 69.4(f) and 69.122, which provide for a contribution charge that may be assessed on special access and expanded interconnection, would affect small incumbent LECs.



Rural Telephone Coalition

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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

In the Matter of)
)
Staff Analysis of)
Forward-Looking Economic Cost Proxy Models)

CPD 97-2

COMMENTS

of the

RURAL TELEPHONE COALITION

February 3, 1997

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SUMMARY

In its analysis, the staff appears to recognize that several issues remain unresolved, and that further study is necessary. Testimony provided during the January 14-15, 1997, proxy model workshops also raised several new issues have been raised which must be addressed. The Rural Telephone Coalition (RTC) strongly agrees with the Commission staff that there remains a need for independent evidence that the models can accurately estimate the forward-looking cost of providing telecommunications service in rural areas.

The RTC is also pleased to see that the Commission staff has begun to address the need for a clearly defined purpose for the models. However, the RTC is concerned that the staff has suggested that the models should be judged by how they fulfill multiple regulatory objectives. Due to the limited time frame being considered by the Commission, and because the currently available models were not designed with this criterion in mind, the RTC is not convinced that they should be used for several purposes in the currently ongoing proceedings.

The RTC does agree that flexibility is critical and should be included as an evaluation criterion. The RTC also refers the Commission staff to comments filed in response to input issues raised during the proxy model workshops. For example, the RTC has previously expressed its concerns regarding the use of Census Block Groups and has also pointed out several problems with the Hatfield model infrastructure sharing, network element⁵, cost of capital and expense assumptions. These assumptions should be

consistent and accurate. The RTC has previously agreed with those panelists that explained that a model which represents the costs of an efficient forward-looking competitive network must also assume forward-looking cost of capital and recovery of capital through depreciation expense.

The staff is correct to ask model sponsors for further justification of calculations of joint and common cost. However, the Staff Analysis neglected to incorporate discussion of a market share component. The RTC urges the staff to consider testimony provided during the workshops on this issue, as any model attempting to predict costs in a competitive world must also account for changes in market share.

Finally, while the RTC agrees that econometric methods may prove to be useful in validation efforts, we also caution the staff that such an effort would require additional time beyond that allowed for completion of the current proceedings. Without negating the usefulness of econometrics as a tool for validation or the estimation of expense, the RTC urges the staff to begin validation efforts with actual engineering studies.

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In the Matter of)
)
Staff Analysis of)
Forward-Looking Economic Cost Proxy Models)

CPD 97-2

COMMENTS
of the
RURAL TELEPHONE COALITION

The Rural Telephone Coalition ("RTC") submits the following comments in response to the Commission's *Public Notice*, DA 97-56, released on January 9, 1997.¹

The *Notice* invites comments on issues raised in a Commission staff paper regarding of the use of economic cost models for various purposes.²

I. INTRODUCTION

In general, the conclusions drawn by the Commission staff appear to be consistent with outside testimony presented during the proxy model workshops,³ in that the staff

¹ The Rural Telephone Coalition is comprised of the National Rural Telecom Association (NRTA), the National Telephone Cooperative Association (NTCA), and the Organization for the Promotion and Advancement of Small Telecommunications Companies (OPASTCO). The RTC filed joint comments and replies on December 19, 1996, and January 10, 1997, in response to the Joint Board's *Recommended Decision* released on November 19, 1996. The RTC also filed further comments on the cost models on August 9, 1996, and filed comments with GVNW-Management, Inc. on issues raised during the Proxy Model Workshops, January 24, 1997.

² See *The Use of Computer Models for Estimating Forward-Looking Economic Costs: A Staff Analysis* ("Staff Analysis"), January 9, 1997.

³ The workshops were conducted by the Federal-State Joint Board on universal service, on January 14-15, 1997. Robert Schoonmaker and Lisa Hanselman of GVNW-

suggests further study is necessary in order to adequately justify the use of the proposed models for any policy purpose. The staff, for example, states that additional evidence is needed to justify model assumptions regarding the treatment of joint and common costs, fill factors, expense and other assumptions.⁴ The RTC agrees and believes that further evaluation is required before the use of a particular model is mandated for any purpose. The RTC is particularly concerned that premature application of a proxy model that has not been thoroughly analyzed and tested could be detrimental to small and rural companies which serve the highest-cost areas and, therefore, harmful to the preservation and advancement of universal service.⁵ The Staff Analysis addresses many issues which were also raised during the cost proxy workshops, and the RTC refers the Commission staff to its previous comments on these issues.⁶ In addition to those issues mentioned by the staff, several new issues were raised during these workshops which must be addressed before a proxy may be selected for use.

The Staff Analysis explicitly requests specific, independent evidence from model sponsors for the evaluation of the models' calculations for rural areas.

In order to evaluate fully these different approaches, we believe that model sponsors should provide us with independent evidence that their approach leads to an accurate estimate of the forward-looking cost of providing telecommunications

Management, Inc. testified on behalf of the RTC.

⁴ See, for example, Staff Analysis at paras. 42-43, 45, 72.

⁵ See Comments of the RTC and GVNW-Management, Inc. at 4, January 24, 1997. See also, RTC Comments at 2, August 9, 1996.

⁶ See, generally, Comments of the RTC and GVNW-Management, Inc., January 24, 1997.

service in rural areas.⁷

The RTC strongly agrees that this evidence is essential in order to ensure that the application of the proposed models to rural companies will not harm the provision of universal service.⁸ The RTC is greatly concerned that the Commission will select a particular model and mandate its use before issues raised by the staff, workshop participants, and other commenters have been thoroughly explored. We urge the Commission staff to continue its analysis of the models and their estimates of forward-looking cost for service in rural areas.

The RTC notes that the latest versions of two models, the Benchmark Cost Proxy Model ("BCPM") and the Hatfield Release 3, have not yet been made available to the public for comment. Indeed, the Staff Analysis addresses only the Cost Proxy Model, the BCM2, and the Hatfield Model, version 2.2, Release 2 ("Hatfield 2.2.2"). No discussion of the BCPM is included, nor does the staff discuss the recently introduced Telecom Economic Cost Model, developed by Ben Johnson Associations, Inc.⁹ The RTC therefore

⁷ Staff Analysis at para. 40.

⁸ Comments of the RTC and GVNW-Management, Inc. at iii, January 24, 1997. The Joint Board recommended that for the purpose of universal service support, a LEC's cost should be determined using a forward-looking methodology that replaces the current system which utilizes actual embedded cost. Note that the RTC maintains its concern that the use of forward-looking cost would not allow incumbent LECs to recover their costs and achieve a reasonable return on investments that have been made pursuant to a regulatory compact. See RTC Comments at 2, CC Docket No. 96-45, December 19, 1996. These comments are provided strictly in the context of the concern that a model which purports to predict forward-looking cost must, in fact, be shown to predict forward-looking cost.

⁹ The Benchmark Cost Proxy Model ("BCPM"), is a hybrid model based on the BCM2, the latest version of the original US West model prepared for CC Docket No.

questions the relevance of the staff's discussion, as it concerns models which are no longer being sponsored in the various proceedings. While the RTC will comment on the issues presented by the Commission staff, we strongly urge the Commission to invite public comment on the updated models once they are made available.

II. CRITERIA FOR EVALUATING THE UTILITY OF ECONOMIC COST MODELS

A. MULTIPLE OBJECTIVES/PURPOSES

The RTC has previously commented on deficiencies in the proxy model evaluation criteria recommended by the Federal-State Joint Board on universal service.¹⁰ The Staff Analysis presents a similar set of criteria for "evaluating the utility of economic cost models," and thus the RTC refers the staff to its December 19, 1996, comments regarding the proxy model evaluation criteria.¹¹

80-286, and Pacific Bell's Cost Proxy Model. The Hatfield Model was first submitted for consideration by AT&T Corporation in CC Docket No. 96-98. According to the documentation filed by AT&T on January 7, 1997, Release 3 of the Hatfield Model will not be available before January 31, 1997. Likewise, though sponsors of the BCPM were able to provide documentation and input data for the new model on January 7, 1997, data from the output modules of the new model remains unavailable. Sponsors plan to make introduce an update of the BCPM on February 15, 1997. The Telecom Economic Model, developed by Ben Johnson Associates, Inc., was introduced to the record by the New Jersey Division of the Ratepayer Advocate on January 7, 1997.

¹⁰ *Recommended Decision* at para. 277, CC Docket No. 96-45, November 8, 1996.

¹¹ For example, the Joint Board's criterion for evaluating the reasonableness of the model only recommends that outputs be "plausible." Plausibility implies only the possibility of adequate support rather than proof of verity. The word *plausible* is insufficiently rigorous and does not adequately address the numerous comments the Commission has already received regarding the absence of proper validation of the proposed models. See RTC Comments at 4-5, CC Docket No. 96-45, December 19, 1996.

The criteria presented by the Commission staff, however, are not identical to those listed in the Joint Board's *Recommended Decision*. The Staff Analysis adds to that list by suggesting that the proxy models or some combination of the proposed models should be multifaceted, so as to accommodate several regulatory objectives.

Proxy models may be utilized for multiple regulatory objectives, such as in a prescriptive approach to access reform, determining levels of universal service support in high cost areas, and the pricing of unbundled network elements.¹²

The RTC is not convinced that this is an appropriate criterion by which to evaluate the proposed models for use in the *current* Commission proceedings. These models were *not designed* for multiple regulatory purposes. In fact, the original BCM was the result of efforts by a number of industry players to develop a tool for targeting a high-cost support amount determined by some other method. The Hatfield Model was developed to compute efficient total network costs and the economic costs of the individual network elements.¹³ It is not yet clear that the updated versions of these models can be applied to all carriers for the purposes for which they were designed, let alone for the purpose of other proceedings, such as access charge reform.¹⁴ The staff's inclusion of this "multipurpose criterion," as well as its questions regarding how the models might be modified so as to be applicable to a prescriptive access charge reform initiative, appears

¹² Staff Analysis at para. 11.

¹³ See *Benchmark Cost Model: A Joint Submission by Sprint Corporation and US WEST, Inc.* at 2, July 3, 1996. See also, Comments of AT&T, *Hatfield Model, Version 2.2, Release 1* at 1, CC Docket No. 96-98, May 16, 1996.

¹⁴ Comments of the RTC and GVNW-Management, Inc. at 5, CC Docket 96-45, January 24, 1997.

to assume a result that prejudices critical access reform issues.¹⁵

However, the RTC is pleased to see that the Staff Analysis does address the question of the purpose of the models. Establishing the precise purpose (or in this case, purposes) and intended use is not only necessary, but "a prerequisite for determining whether a model is valid."¹⁶ The RTC has previously highlighted the Commission's failure to establish a purpose for developing these models.¹⁷ Further, the RTC has pointed out that attempting to compare the advantages and disadvantages of models that were designed for such different purposes as the original BCM and Hatfield model necessarily raises concern about *which* purpose the Commission intends an adopted model to serve.¹⁸

In that regard, the RTC supports the Staff Analysis discussion of purpose as an evaluation criterion. Nevertheless, the record does not support the idea that the models should be used for multiple purposes, particularly since they were not designed with this criterion in mind. To justify multiple uses moreover, the model would need to be properly validated with regard to *each* different purpose. The staff's suggestion that the proposed models may be employed for multiple regulatory objectives, with only a few

¹⁵ The staff's implication that proxy models should be applied to a prescriptive access charge reform initiative is premature, as the Commission has not yet decided whether or not to adopt a prescriptive approach to access reform. Reply comments in the Access Charge Reform proceeding, CC Docket No. 96-262, have not yet been filed.

¹⁶ RTC Further Comments at 3, CC Docket 96-45, August 9, 1996.

¹⁷ *Ibid.*

¹⁸ *Ibid.*

minor adjustments, is unconvincing.

B. FLEXIBILITY

The staff includes flexibility in its list of criteria for evaluating economic cost models:

We believe that cost proxy models should permit states to utilize [information on local conditions] ... Also... a model should be sufficiently flexible to permit a user to vary model inputs.¹⁹

The RTC strongly concurs with the staff's suggestion that the models should be flexible, so that variation of certain inputs is permitted. Flexibility is particularly critical for the application of models to small, rural companies. Because high cost areas are both unique and varied, they continue to be the hardest to find predictive variables with which to model forward-looking cost.²⁰

In the staff's discussion concerning the proper switching and electronic equipment prices, the staff points out that both the Hatfield 2.2.2 and the BCM2 assume switch vendors typically grant carriers substantial discounts when selling switches.²¹ This assumption presents a perfect example of the need for flexibility in inputs. Small and rural companies do not generally benefit from switch discounts, because these discounts usually relate to volume. A default switching equipment expense based on an assumed discount that applies to larger companies would not be an appropriate input for the estimation of a rural company's forward-looking switching equipment expense. The

¹⁹ Staff Analysis at para. 16.

²⁰ See RTC Further Comments at 16, CC Docket 96-45, August 9, 1996.

²¹ Staff Analysis at para. 49.

RTC not only agrees with the Commission staff that flexibility allowing variation of user inputs makes a model "more useful,"²² but we also urge the Commission to *ensure* that the unique features of individual rural companies can be recognized by the selected model.

III. SPECIFIC MODEL STRUCTURE AND INPUT REQUIREMENTS

A. REMOVAL OF WIRE CENTER ASSUMPTION

In its analysis, the Commission staff suggests that "the models' assumption regarding the locations of LEC wire centers could be relaxed at some future time."²³ However, the staff claims only to continue its exploration of "various interpretations of the fixed wire center assumption" at the present time.²⁴ The RTC reminds the Commission staff of the following fact. The record clearly indicates that although the assumption of existing wire center location may be inconsistent with the theory of forward-looking economic cost, the placement of wire centers is not readily susceptible to modeling. In any event, it is doubtful that model sponsors can successfully incorporate the placement of wire centers within the time frame being considered in the current universal service proceeding.²⁵

²² Staff Analysis at para. 16.

²³ Staff Analysis at para. 19. However, the Joint Board recommended a list of criteria for evaluating the reasonableness of any proxy model which provided that the model should "use the incumbent LECs' wire centers as the center of the loop network for the reasonably foreseeable future." *See Recommended Decision* at para. 277.

²⁴ Staff Analysis at para. 20.

²⁵ The Joint Board on universal service recommended that proxies be implemented for non-rural companies by January 1, 1998, and that universal service support be based

B. GEOGRAPHIC UNIT OF ANALYSIS

The Staff Analysis includes some discussion on the advantages and disadvantages of using either census block groups (CBGs) or a grid structure as the basic unit of analysis. While the staff recognizes that a grid structure "allow[s] households to be matched more accurately with existing wire centers,"²⁶ it states that because a large number of grids may increase computing costs of running the model, a simplification may be necessary to offset the computing cost increase. "Such simplifications could lessen the accuracy of a model's estimates."²⁷

The RTC has previously stated its concerns regarding the models' use of CBGs.²⁸ It is obvious from the testimony presented during the proxy workshops that concern remains over whether or not model results based on CBG data can accurately reflect actual data specific to individual company boundaries. For example, Joel Shifman (Maine Public Utilities Commission) expressed strong concern that many errors produced by the current models can be linked to the CBG assignment errors - errors which have not been corrected.

The RTC is naturally concerned about the potential errors generated by the assignment of CBGs. Sponsors of the hybrid BCPM, however, assert that

on proxy models for all companies by the year 2004. *See Recommended Decision* at para. 272.

²⁶ Staff Analysis at para. 22.

²⁷ *Ibid.*

²⁸ RTC Comments at 14, CC Docket 96-45, August 9, 1996.